

# **WAG 9**

## **APPENDIX A**

### **ANL-W COMBINED DATA SET 1986-1995**

**for OPERABLE UNIT 9-04:  
COMPREHENSIVE RI/FS  
FINAL WORK PLAN**



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## **Key**

Explanation of correlation between Appendix A (WAG 9 data results) and Appendix B (sample maps). Appendix A lists the pages where all the sampling data for a specific unit and type (soil, water, and sludge). These tables are a correlation of all data for each unit and type collected between 1986 and 1995. The data in Appendix A has been sorted according to the fourth column (compound). Appendix B shows location of where the 1986 to 1995 samples were collected. The steps to either locate a sample location or corresponding sample data are as follows.

Step 1 locate the sample in Appendix A that you want to find the sample location. For this example we will use the first sample on page A-4.

Step 2 Use the furthest column (sample date) in Appendix A to determine the year the sample was collected along with the sample unit from table of contents. For this example November 2, 1994, and analytical results for soil samples collected at the ANL Sewage Lagoons.

Step 3 Take the values from Steps 2 to locate the appropriate map in Appendix B. For this example Operable Unit 9-01 of WAG-9 (Sewage Lagoons) (1994) map would be used.

Step 4 Find the column labeled "Location" in Appendix A. For this example 8.

Step 5 Use the map identified in Step 3 and the grid location from Step 4 to find the sample location.

The data presented in this appendix represent the best available information at the time of printing. Because of the limited information certain assumptions were made. One of these assumptions is assigning a month and day to quality control data when only the year was available. Therefore, an arbitrary date of January 1 was assumed. Another assumption is to assign one detection limit for gamma-emitting radionuclides when a range of concentrations was reported. To be conservative, the highest detection limit was selected.

## **Appendix A**

### **Analytical Results for the Samples Collected at Sites Retained in the WAG 9 Cumulative Risk Assessment**

**Analytical Results for  
Soil Samples Collected  
at the ANL Sewage Lagoons  
(ANL-04)**

Sample No.	Lab Samp ID	Analysis	Compound	Concentration	Re-Uncert.	Units	Q Flags	Matrix	Type	Location	Depth Range (ft)	Sample Date
04-02	943657-1	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	943657-2	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	943657-3	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-05	943657-4	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	943657-5	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-08	943657-6	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-08	943657-6	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	943657-7	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	943657-8	RAD	Ag-108M	.02	pc1/-9	U		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	943657-1	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	943657-2	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-04	943657-3	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-05	943657-4	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	943657-5	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	32	0-0.5	02-NOV-94
04-08	943657-6	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-09	943657-7	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-10	943657-8	RAD	Ag-110M	.02	pc1/-9	U		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-02	94350510	INORG	Aluminum	5350	mg/kg	P		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-03	94350511	INORG	Aluminum	9030	mg/kg	P		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-06	94350512	INORG	Aluminum	6030	mg/kg	P		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-07	94350514	INORG	Aluminum	7970	mg/kg	P		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-08	94350515	INORG	Aluminum	6680	mg/kg	P		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-09	94350516	INORG	Aluminum	9200	mg/kg	P		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-10	94350517	INORG	Aluminum	12100	mg/kg	P		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-02	943650-1	RAD	Am-241	.03	pc1/-8	UJ		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-03	943650-1	RAD	Am-241	.03	pc1/-8	UJ		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-04	943650-1	RAD	Am-241	.04	pc1/-9	U		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-05	943650-1	RAD	Am-241	.04	pc1/-9	U		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-06	943650-1	RAD	Am-241	.04	pc1/-9	U		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-07	943650-1	RAD	Am-241	.04	pc1/-9	U		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-08	943650-2	RAD	Am-241	.04	pc1/-9	U		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-09	943650-7	RAD	Am-241	.03	pc1/-9	UJ		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-10	943650-7	RAD	Am-241	.04	pc1/-9	U		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-05	943657-4	RAD	Antimony	41.5	mg/kg	R		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-07	943657-5	RAD	Antimony	106	mg/kg	R		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-08	943650-2	RAD	Antimony	.06	pc1/-9	U		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-09	943650-7	RAD	Antimony	.03	pc1/-9	UJ		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-10	943650-7	RAD	Antimony	.04	pc1/-9	U		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-05	943650-10	INORG	Antimony	66.3	mg/kg	R		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-06	94350515	INORG	Antimony	22.5	mg/kg	R		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-03	94350511	INORG	Antimony	106	mg/kg	R		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-04	94350512	INORG	Antimony	88.9	mg/kg	R		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-07	94350514	INORG	Antimony	66.3	mg/kg	R		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-08	94350515	INORG	Antimony	10.4	mg/kg	F		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-09	94350516	INORG	Antimony	8.7	mg/kg	J		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-10	94350517	INORG	Antimony	52.3	mg/kg	J		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-02	94350510	INORG	Arsenic	20.8	mg/kg	R		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-03	94350511	INORG	Arsenic	5.6	mg/kg	B		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-07	94350514	INORG	Arsenic	10.4	mg/kg	J		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-04	94350512	INORG	Arsenic	2.5	mg/kg	B		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-07	94350511	INORG	Barium	170	mg/kg	P		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-03	94350511	INORG	Barium	55.9	mg/kg	P		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-04	94350512	INORG	Barium	2.2	mg/kg	J		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-09	94350516	INORG	Barium	3.6	mg/kg	J		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-10	94350514	INORG	Barium	196	mg/kg	B		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-02	94350510	INORG	Boron	109	mg/kg	J		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-07	94350514	INORG	Boron	126	mg/kg	P		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	94350511	INORG	Boron	159	mg/kg	P		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	94350510	INORG	Beryllium	.46	mg/kg	J		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	94350511	INORG	Beryllium	.71	mg/kg	J		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	94350512	INORG	Beryllium	.59	mg/kg	J		SLUDGE	ANL-04	31	0-0.5	02-NOV-94

Sample No.	Sample ID	Analysis	Compound	Concentration	Amt.	Uncert.	Units	Q Flags	Matrix	Type	Location	Location	Depth Range (ft.)	Sample Date
04-07	94330514	INORG	Beryllium	1.8	mg/kg	J	F	SLUDGE	ANL-04	2	0-0.5	0-0.5	02-NOV-94	
04-08	94330515	INORG	Beryllium	.57	mg/kg	J	F	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94	
04-09	94330516	INORG	Beryllium	.82	mg/kg	J	F	SLUDGE	ANL-04	34	0-0.5	0-0.5	02-NOV-94	
04-10	94330517	INORG	Beryllium	.5	mg/kg	J	F	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94	
04-02	94330510	INORG	Cadmium	2.8	mg/kg	U	P	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94	
04-03	94330511	INORG	Cadmium	7.1	mg/kg	U	P	SLUDGE	ANL-04	18	0-0.5	0-0.5	02-NOV-94	
04-04	94330512	INORG	Cadmium	5.9	mg/kg	U	P	SLUDGE	ANL-04	31	0-0.5	0-0.5	02-NOV-94	
04-07	94330514	INORG	Cadmium	4.4	mg/kg	U	P	SLUDGE	ANL-04	2	0-0.5	0-0.5	02-NOV-94	
04-08	94330515	INORG	Cadmium	1.5	mg/kg	U	P	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94	
04-09	94330516	INORG	Cadmium	2.2	mg/kg	U	P	SLUDGE	ANL-04	34	0-0.5	0-0.5	02-NOV-94	
04-10	94330517	INORG	Cadmium	1.4	mg/kg	U	P	SLUDGE	ANL-04	2	0-0.5	0-0.5	02-NOV-94	
04-02	94330510	INORG	Calcium	16100	mg/kg	P	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94		
04-03	94330511	INORG	Calcium	26100	mg/kg	P	SLUDGE	ANL-04	18	0-0.5	0-0.5	02-NOV-94		
04-04	94330512	INORG	Calcium	12700	mg/kg	P	SLUDGE	ANL-04	31	0-0.5	0-0.5	02-NOV-94		
04-07	94330514	INORG	Calcium	13400	mg/kg	P	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94		
04-08	94330515	INORG	Calcium	6540	mg/kg	P	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94		
04-09	94330516	INORG	Calcium	9250	mg/kg	P	SLUDGE	ANL-04	34	0-0.5	0-0.5	02-NOV-94		
04-10	94330517	INORG	Calcium	77100	mg/kg	P	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94		
04-02	94330511	INORG	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94		
04-03	94330512	INORG	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	18	0-0.5	0-0.5	02-NOV-94		
04-07	94330514	INORG	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	31	0-0.5	0-0.5	02-NOV-94		
04-08	94330515	INORG	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94		
04-04	94330517-3	RAD	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	31	0-0.5	0-0.5	02-NOV-94		
04-05	94330517-4	RAD	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	51	0-0.5	0-0.5	02-NOV-94		
04-07	94330517-5	RAD	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	2	0-0.5	0-0.5	02-NOV-94		
04-08	94330517-6	RAD	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94		
04-09	94330517-7	RAD	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	34	0-0.5	0-0.5	02-NOV-94		
04-10	94330517-8	RAD	Ce-144	.1	PCl/s	U	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94		
04-02	94330510	INORG	Chromium	21	mg/kg	P	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94		
04-03	94330511	INORG	Chromium	76.4	mg/kg	P	SLUDGE	ANL-04	18	0-0.5	0-0.5	02-NOV-94		
04-04	94330512	INORG	Chromium	54.5	mg/kg	P	SLUDGE	ANL-04	31	0-0.5	0-0.5	02-NOV-94		
04-07	94330514	INORG	Chromium	9.9	mg/kg	U	P	SLUDGE	ANL-04	2	0-0.5	0-0.5	02-NOV-94	
04-08	94330515	INORG	Chromium	13.1	mg/kg	P	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94		
04-09	94330516	INORG	Chromium	16.2	mg/kg	P	SLUDGE	ANL-04	34	0-0.5	0-0.5	02-NOV-94		
04-10	94330517	INORG	Chromium	19.2	mg/kg	P	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94		
04-02	94330510	RAD	Cr-242	0	.00	PCl/s	U	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94	
04-03	94330511	RAD	Cr-244	0	.00	PCl/s	U	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94	
04-04	94330512	RAD	Cr-244	.03	.02	PCl/s	U	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94	
04-07	94330514	RAD	Cr-60	.01	.01	PCl/s	U	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94	
04-08	94330515	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94	
04-09	94330516	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	18	0-0.5	0-0.5	02-NOV-94	
04-04	94330517-3	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	31	0-0.5	0-0.5	02-NOV-94	
04-05	94330517-4	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94	
04-07	94330517-5	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94	
04-08	94330517-6	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	34	0-0.5	0-0.5	02-NOV-94	
04-09	94330517-7	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94	
04-10	94330517-8	RAD	Cr-60	.06	.06	PCl/s	U	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94	
04-02	94330510	INORG	Cobalt	5.5	mg/kg	P	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94		
04-03	94330511	INORG	Cobalt	14.2	mg/kg	P	SLUDGE	ANL-04	18	0-0.5	0-0.5	02-NOV-94		
04-04	94330512	INORG	Cobalt	11.9	mg/kg	U	P	SLUDGE	ANL-04	51	0-0.5	0-0.5	02-NOV-94	
04-07	94330514	INORG	Cobalt	8.8	mg/kg	U	P	SLUDGE	ANL-04	2	0-0.5	0-0.5	02-NOV-94	
04-08	94330515	INORG	Cobalt	3	mg/kg	U	P	SLUDGE	ANL-04	60	0-0.5	0-0.5	02-NOV-94	
04-09	94330516	INORG	Cobalt	4.3	mg/kg	U	P	SLUDGE	ANL-04	10	0-0.5	0-0.5	02-NOV-94	
04-10	94330517	INORG	Cobalt	8.6	mg/kg	B	P	SLUDGE	ANL-04	34	0-0.5	0-0.5	02-NOV-94	
04-02	94330510	INORG	Copper	63.9	mg/kg	P	SLUDGE	ANL-04	8	0-0.5	0-0.5	02-NOV-94		
04-03	94330511	INORG	Copper	366	mg/kg	P	SLUDGE	ANL-04	18	0-0.5	0-0.5	02-NOV-94		
04-04	94330512	INORG	Copper	266	mg/kg	P	SLUDGE	ANL-04	31	0-0.5	0-0.5	02-NOV-94		



Sample No.	Lab	Samp ID	Analysis	Compound	Concentration	Uncert.	Units	Q Fluxes	Matrix	Type	Location	Location	Depth Range(ft)	Sample Date
04-09		94330516	INORG	Lead	16	.05	mg/kg	F	SLUDGE	ANL-04	34	0-0.5	02-NOV-94	
04-10		94330517	INORG	Lead	8.8	.05	mg/kg	F	SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-02		94330510	INORG	Magnesium	4090	.05	mg/kg	P	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-03		94330511	INORG	Magnesium	6820	.05	mg/kg	B	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-04		94330512	INORG	Magnesium	4500	.05	mg/kg	B	SLUDGE	ANL-04	31	0-0.5	02-NOV-94	
04-07		94330514	INORG	Manganese	5470	.05	mg/kg	P	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-08		94330515	INORG	Manganese	3780	.05	mg/kg	P	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330516	INORG	Magnesium	5290	.05	mg/kg	P	SLUDGE	ANL-04	34	0-0.5	02-NOV-94	
04-10		94330517	INORG	Magnesium	14800	.05	mg/kg	P	SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-02		94330510	INORG	Manganese	135	.05	mg/kg	J	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-03		94330511	INORG	Manganese	254	.05	mg/kg	J	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-04		94330512	INORG	Manganese	182	.05	mg/kg	J	SLUDGE	ANL-04	31	0-0.5	02-NOV-94	
04-07		94330514	INORG	Manganese	158	.05	mg/kg	J	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-08		94330515	INORG	Manganese	107	.05	mg/kg	J	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330516	INORG	Manganese	118	.05	mg/kg	J	SLUDGE	ANL-04	34	0-0.5	02-NOV-94	
04-10		94330517	INORG	Manganese	246	.05	mg/kg	J	SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-02		94330510	INORG	Mercury	1	.05	mg/kg	J	CV SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-03		94330511	INORG	Mercury	3.2	.05	mg/kg	J	CV SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-04		94330512	INORG	Mercury	2.8	.05	mg/kg	J	CV SLUDGE	ANL-04	31	0-0.5	02-NOV-94	
04-07		94330514	INORG	Mercury	.55	.05	mg/kg	U	CV SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-08		94330515	INORG	Mercury	.19	.05	mg/kg	U	CV SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330516	INORG	Mercury	.27	.05	mg/kg	U	CV SLUDGE	ANL-04	34	0-0.5	02-NOV-94	
04-10		94330517	INORG	Mercury	.17	.05	mg/kg	U	CV SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-02		94330511	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-03		94330512	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-07		94330514	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-08		94330515	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	31	0-0.5	02-NOV-94	
04-09		94330516	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-10		94330517	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-02		94330511	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-03		94330512	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-07		94330514	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-08		94330515	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	31	0-0.5	02-NOV-94	
04-09		94330516	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-10		94330517	RAD	Mn-54	.02	.05	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-02		94330510	INORG	Nickel	18.2	.05	mg/kg	B	SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-03		94330511	INORG	Nickel	35.4	.05	mg/kg	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-04		94330512	INORG	Nickel	41.4	.05	mg/kg	B	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-07		94330514	INORG	Nickel	22.1	.05	mg/kg	U	SLUDGE	ANL-04	54	0-0.5	02-NOV-94	
04-08		94330515	INORG	Nickel	13.6	.05	mg/kg	B	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-09		94330516	INORG	Nickel	17.7	.05	mg/kg	B	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-10		94330517	INORG	Nickel	25	.05	mg/kg	B	SLUDGE	ANL-04	54	0-0.5	02-NOV-94	
04-02		94330510	INORG	Potassium	1080	.05	mg/kg	B	SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-03		94330511	INORG	Potassium	2430	.05	mg/kg	B	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-07		94330516	INORG	Potassium	1550	.05	mg/kg	B	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-08		94330517	INORG	Potassium	3150	.05	mg/kg	B	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330515	INORG	Potassium	2120	.05	mg/kg	B	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-09		94330516	INORG	Potassium	2760	.05	mg/kg	P	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-10		94330517	INORG	Potassium	2870	.05	mg/kg	P	SLUDGE	ANL-04	54	0-0.5	02-NOV-94	
04-02		94330511	RAD	Pu-238	.01	.02	PC1/9	U	SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-03		94330512	RAD	Pu-238	.01	.02	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-07		94330514	RAD	Pu-238	0	.01	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-08		94330515	RAD	Pu-238	.05	.03	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330510	RAD	Pu-238	0	.02	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330511	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	60	0-0.5	02-NOV-94	
04-09		94330512	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-09		94330514	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-09		94330515	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330516	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-09		94330517	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330518	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330519	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330520	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-09		94330521	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-09		94330522	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330523	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-09		94330524	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330525	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330526	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330527	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-09		94330528	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-09		94330529	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330530	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-09		94330531	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330532	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330533	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330534	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-09		94330535	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-09		94330536	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330537	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-09		94330538	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330539	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330540	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330541	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94	
04-09		94330542	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94	
04-09		94330543	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330544	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94	
04-09		94330545	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	51	0-0.5	02-NOV-94	
04-09		94330546	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94	
04-09		94330547	RAD	Pu-238	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5		

Sample No.	Lab Samp ID	Analysis	Compound	Concentration	Red Uncrt.	Units	Q Flags	Matrix	Type	Location	Depth Range( ft.)	Sample Date
04-09	943657-7	RAD	Ru-106	.01	PC1/8	U		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	943657-8	RAD	Ru-106	.01	PC1/9	U		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	943657-1	RAD	Sb-125	.08	PC1/9	U		SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	943657-2	RAD	Sb-125	.08	PC1/9	U		SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	943657-3	RAD	Sb-125	.06	PC1/9	U		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-05	943657-4	RAD	Sb-125	.08	PC1/9	U		SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	943657-5	RAD	Sb-125	.08	PC1/9	U		SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-08	943657-6	RAD	Sb-125	.08	PC1/9	U		SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	943657-7	RAD	Sb-125	.08	PC1/9	U		SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	943657-8	RAD	Sb-125	.08	PC1/9	U		SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	94350510	INORG	Selenium	1.4	mg/kg	U	F	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	94350511	INORG	Selenium	3.5	mg/kg	H	F	SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	94350512	INORG	Selenium	5	mg/kg	H	F	SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	94350514	INORG	Selenium	2.2	mg/kg	U	F	SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-08	94350515	INORG	Selenium	.75	mg/kg	H	F	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	94350516	INORG	Selenium	1.1	mg/kg	U	F	SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	94350517	INORG	Selenium	.69	mg/kg	U	F	SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	94350510	INORG	Silver	4.2	mg/kg	U	P	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	94350511	INORG	Silver	37.2	mg/kg	U	P	SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-04	94350512	INORG	Silver	8.9	mg/kg	U	P	SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-07	94350514	INORG	Silver	6.6	mg/kg	U	P	SLUDGE	ANL-04	51	0-0.5	02-NOV-94
04-08	94350515	INORG	Silver	2.2	mg/kg	U	P	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	94350516	INORG	Silver	3.2	mg/kg	U	P	SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	94350517	INORG	Silver	2.1	mg/kg	U	P	SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	94350510	INORG	Sodium	435	mg/kg	B	P	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	94350511	INORG	Sodium	1230	mg/kg	B	P	SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-04	94350512	INORG	Sodium	891	mg/kg	B	P	SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-07	94350514	INORG	Sodium	1530	mg/kg	B	P	SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-08	94350515	INORG	Sodium	470	mg/kg	B	P	SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-09	94350516	INORG	Sodium	646	mg/kg	B	P	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-10	94350517	INORG	Sodium	523	mg/kg	B	P	SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-02	943690-1	RAD	Sr-90	4.2	.50	PC1/9	U	SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-08	943690-2	RAD	Th-228	.2	.20	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-02	943690-1	RAD	Th-228	.5	.50	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-08	943690-2	RAD	Th-228	.4	.50	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-02	943690-1	RAD	Th-230	.9	.70	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-08	943690-2	RAD	Th-230	.8	.60	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-02	943690-1	RAD	Th-232	.6	.70	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-08	943690-2	RAD	Th-232	1	.80	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-02	943690-1	RAD	Thallium	4.2	mg/kg	U	F	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	94330511	INORG	Thallium	10.6	mg/kg	U	F	SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	94330512	INORG	Thallium	8.9	mg/kg	U	F	SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	94330514	INORG	Thallium	6.6	mg/kg	U	F	SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-08	94330515	INORG	Thallium	2.2	mg/kg	U	F	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	94330516	INORG	Thallium	3.2	mg/kg	U	F	SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	94330517	INORG	Thallium	2.1	mg/kg	U	F	SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	943569-1	RAD	U-232	.01	.23	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-08	943569-2	RAD	U-232	0	.20	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-02	943569-1	RAD	U-235	.01	.01	PC1/9	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-08	943569-2	RAD	U-235	.01	.01	PC1/9	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-09	943569-7	RAD	U-235	.01	.01	PC1/9	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	943569-7	RAD	U-235	.01	.01	PC1/9	U	SLUDGE	ANL-04	34	0-0.5	02-NOV-94

Sample No.	Samp ID	Analysis	Compound	Concentration	Re-Uncert.	Units	Q Flags	Type	Location	Location	Depth Range(ft)	Sample Date
04-10	943657-8	RAD	U-235	.01	.60	pCi/s	U	SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	943650-1	RAD	U-238	1	.70	pCi/s	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-08	943650-2	RAD	U-238	1.3				SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-02	94350510	INORG	Vanadium	56.3		mg/kg	B	P SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	94350511	INORG	Vanadium	72.6		mg/kg	B	P SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	94350512	INORG	Vanadium	51.5		mg/kg	B	P SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	94350514	INORG	Vanadium	3.3		mg/kg	U	P SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-08	94350515	INORG	Vanadium	26.3		mg/kg	P	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	94350516	INORG	Vanadium	32.1		mg/kg	P	SLUDGE	ANL-04	36	0-0.5	02-NOV-94
04-10	94350517	INORG	Vanadium	32.6		mg/kg	P	SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	94350510	INORG	Zinc	488		mg/kg	J	P SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	94350511	INORG	Zinc	2390		mg/kg	J	P SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	94350512	INORG	Zinc	1890		mg/kg	J	P SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	94350514	INORG	Zinc	94		mg/kg	J	P SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-08	94350515	INORG	Zinc	53.1		mg/kg	J	P SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	94350516	INORG	Zinc	79.8		mg/kg	J	P SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	94350517	INORG	Zinc	77.2		mg/kg	J	P SLUDGE	ANL-04	60	0-0.5	02-NOV-94
04-02	943507-1	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	8	0-0.5	02-NOV-94
04-03	943507-2	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	18	0-0.5	02-NOV-94
04-04	943507-3	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-05	943507-4	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	31	0-0.5	02-NOV-94
04-07	943507-5	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	2	0-0.5	02-NOV-94
04-08	943507-6	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	10	0-0.5	02-NOV-94
04-09	943507-7	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	34	0-0.5	02-NOV-94
04-10	943507-8	RAD	Zn-65	.04		pCi/s	U	SLUDGE	ANL-04	60	0-0.5	02-NOV-94

300 rows selected.

SQL> spool off